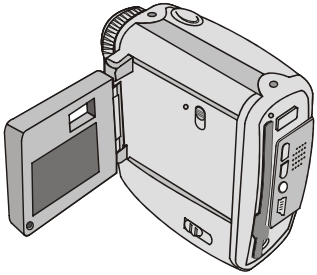
Pocket DV 5100M

User's Manual

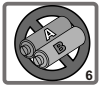


WELCOME

Dear user, thanks for purchasing this product. Much investment in time and effort has gone into its development, and it is our hope that it will give you many years of trouble-free service.

CAUTION

1. Do not drop, puncture or disassemble the camera; otherwise the warranty will be voided.
2. Avoid all contact with water and dry hands before using.
3. Do not expose the camera to high temperature or leave it in direct sunlight. Doing so may damage the camera.
4. Use the camera with care. Avoid pressing hard on the camera body.
5. For your own safety, avoid using the camera when there is a storm or lightning.
6. Avoid using batteries of different brands or types at the same time.
7. Remove batteries during long periods between usage, as deteriorated batteries may affect the functionality of the camera.
8. Remove batteries if they show signs of leaking or distortion.
9. We suggest using only the accessories supplied by the manufacturer.



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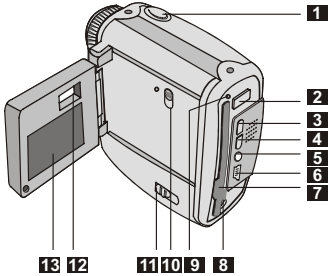
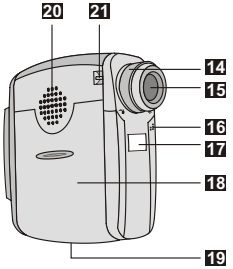
Getting Started

1. Your camera parts

Knowing your camera parts well before using it will assist you greatly in camera operation.



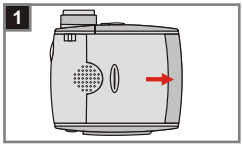


1 Shutter button
2 Record button
3 Up button (Zoom in)
4 Down button (Zoom out)
5 MENU/OK button (Power button)
6 USB port
7 Card slot (with cover)
8 A/V out connector
9 LED indicator
10 LCD on/off switch
11 CF card eject switch
12 Viewfinder
13 LCD display
14 Focus switch
15 Lens
16 Microphone
17 Self-portrait mirror
18 Battery cover
19 Tripod port
20 Speaker
21 Strap hook

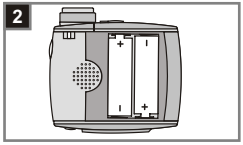
2. Loading the battery

Please use two AA batteries.

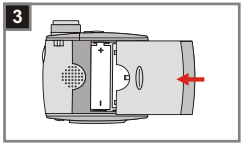
1 Slide the **battery cover** in the direction of indication to open it.



2 Follow the indication to load batteries into the **battery section** with + and - ends correctly installed.



3 Slide the **battery cover** in the direction of indication to lock it.

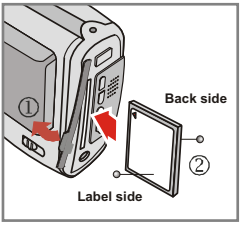


1. We recommend you to use rechargeable 1.2V Ni-MH batteries to increase the time of usage.
2. 1.5V alkaline batteries are also recommended for high performance.

3. Inserting and removing the CF card (optional)

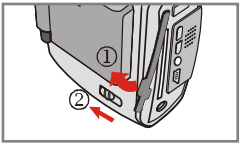
1 Inserting the card

First lift and slide the cover open. Then insert the card in the direction of indication and push it in till the end of the card slot.



2 Removing the card

Lift and slide the cover open. Then push the **Eject switch** in the direction of indication to remove the card.



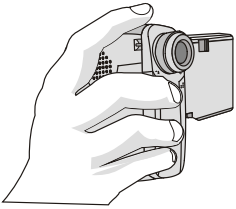
To confirm if the card is inserted firmly:

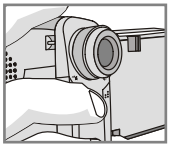
If successfully inserting a memory card while the camera is powered on, a beep will emit and the icon will appear at the top right section of the LCD display.

The camera comes with flash memory built inside for storage. If you do not insert a CF card, the data will be automatically saved in the built-in flash memory.

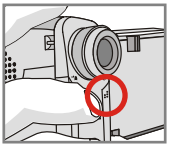
4. How to hold your camera

Please hold the camera as the following illustration indicates. Avoid blocking the lens or the microphone to retain better image/sound recordings.





Avoid blocking the lens.



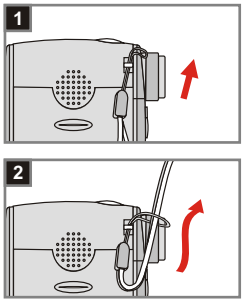
Avoid hindering the microphone.

5. Attaching the strap

For convenience and safety, you may wish to attach the carrying strap.

1 Thread the strap loop through the hook in the direction of indication.

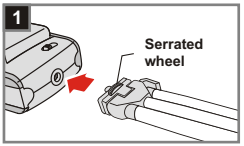
2 Fasten the strap loop as indicated.



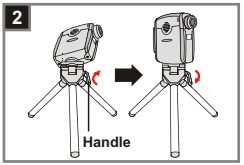
6. Using the tripod

Use the tripod to minimize camera movement and ensure optimal image quality, particularly while taking self-portraits or having a video conference.

1 Attach the tripod to the port on the bottom of the camera and rotate the serrated wheel to lock it.



2 Unfold the legs to set up. Pull upward the handle and adjust the alignment to the desired position. Then pull downward the handle to lock.

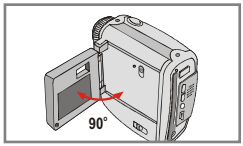


Basic Operation

1. Switching on and off

1 Switching on

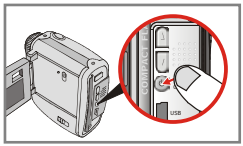
Open the LCD panel as indicated or press and hold down the **MENU/OK button** for 3 seconds to switch the camera on.



OR

2 Switching off

Close the LCD panel as indicated or press and hold down the **MENU/OK button** for 3 seconds to switch the camera off.



If the camera stays idle for over 60 seconds, the LCD display will be turned off to conserve battery power. Pressing any key will awake the camera. If you do not operate the camera for over 3 minutes, it will shut down automatically.

If the LCD panel is closed during recording or video/audio playback, the camera will not stop working unless you manually terminate the recording or playback.

2. Setting the language

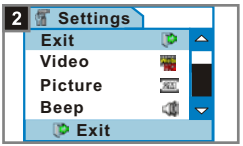
When you switch the camera on for the first time, the LCD display may not show messages in your local language. You can set the LCD display language by using the method below.

1 **Menu mode**

Press the **MENU/OK button** to enter the ***MENU***.

2 **Settings mode**

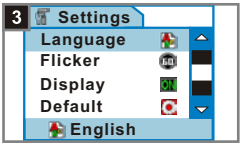
Use the **Up** or **Down button** to highlight the **Settings_** item. Then press the **MENU/OK button** to confirm.



3 **Select language**

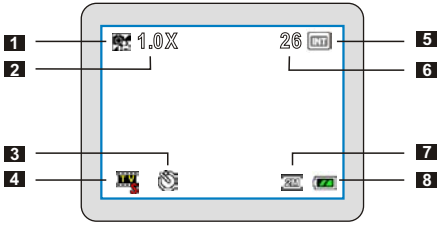
Use the **Up** or **Down button** to highlight the **Language_** item. Then press the **MENU/OK button** to confirm.

Use the **Up** or **Down** button to highlight the desired language. Then press the **MENU/OK button** to confirm.



Press the **Record button** to exit.

3. The LCD display information

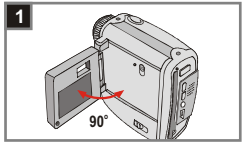


1. Still picture/ video mode
2. Zoom ratio
3. Self-timer mode
4. Video resolution
5. Storage media
   - Internal memory:
   - CF card:
6. Number of pictures, video clips and audio clips
7. Picture resolution
8. Battery life

4. Recording movies

1 Switch on

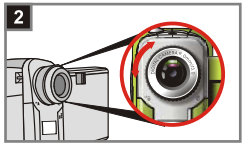
Open the LCD panel to switch the camera on.



2 Focus

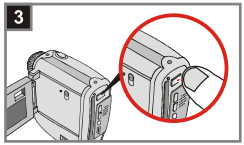
Adjust the **Focus switch** to set the focus as appropriate.

	Macro	12"~16" (30cm~40cm)
	Micro	16"~ ∞ (40cm~ ∞)



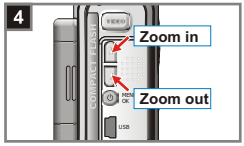
3 Start recording

Press the **Record button** to start recording. The counter on the screen will start counting.



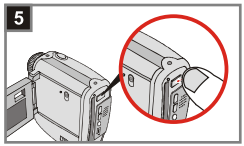
4 Zoom in or zoom out

Press the **Up button** to zoom in or the **Down button** to zoom out.



5 Stop recording

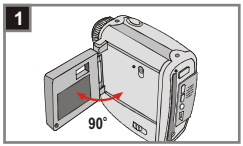
Press the **Record button** again to stop recording.



5. Taking still pictures

1 Switch on

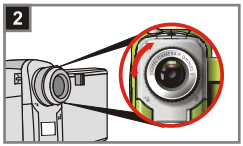
Open the LCD panel to switch the camera on.



2 Focus

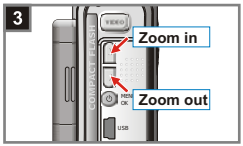
Push the **Focus switch** to set the mode best for your picture.

	Macro	12"~16" (30cm~40cm)
	Micro	16"~ ∞ (40cm~ ∞)



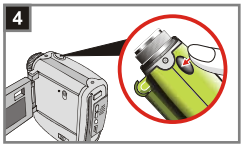
3 Zoom in or zoom out

Press the **Up button** to zoom in or the **Down button** to zoom out.



4 Take a still

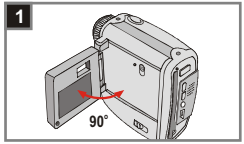
Press the **Shutter button** to take a still picture.



6. Recording audio clips

1 **Switch on**

Open the LCD panel to switch the camera on.

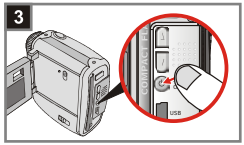


2 **Record audio mode**

Press the **MENU/OK button** to enter the ***MENU***. Use the **Up** or **Down button** to highlight the **Record Audio_** item.

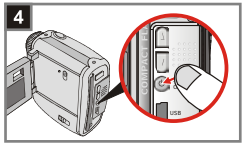
3 **Start recording**

Then press the **MENU/OK button** to start recording. The counter on the screen will start counting.



4 **Stop recording**

Press the **MENU/OK button** again to stop recording.

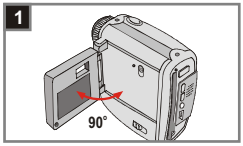


7. Playing your pictures, movies and audio clips

1 Playback mode

1 Switch on

Open the LCD panel to switch the camera on.

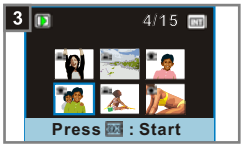


2 Playback mode

Press the **MENU/OK button** to enter the ***MENU***. Use the **Up** or **Down button** to highlight the **Playback_** item. Then press the **MENU/OK button** to enter the playback mode.

3 Select images

You are now in the thumbnail mode. Press the **Up button** to select the previous image or the **Down button** to select the next one. The selected file will be highlighted.



Thumbnail view

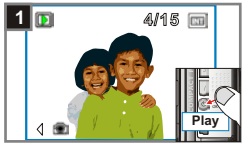
There are three file types that you can identify by the icon at the top left section of the thumbnails.

- : pictures
- : video clips
- : audio clips

2 Viewing your pictures

1 View a picture

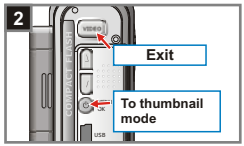
(Continuing page 15) Once you select the target file with a icon, press the **MENU/OK button** to view the full-screen file.



Full-screen view

2 Exit

Press the **MENU/OK button** to return to thumbnail view or press the **Record button** to exit.

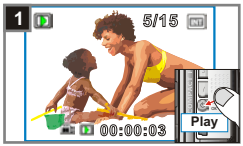


In the full-screen mode, you can use the **Up** and **Down buttons** to shift between files.

3 Playing your movies and audio clips

1 Play

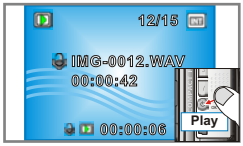
(Continuing page 15) Once you select the target file with a (video) or (audio) icon, press the **MENU/OK button** to play the file.



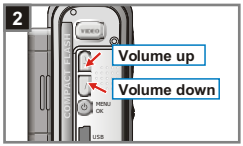
The video clip is played.

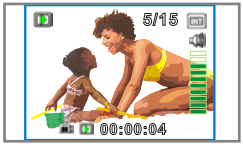
2 Adjust the volume

While playing a recording, use the **Up** or **Down button** to increase or decrease the volume.



The audio clip is played.

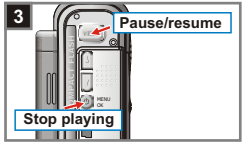




The volume controller will appear at the right side while adjusting the volume.

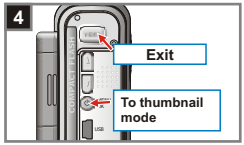
3 Stop playing

While playing back a recording, you can press the **MENU/OK button** to stop playing.



Pause and resume

While playing a recording, you can press the **Video button** to pause. Press the **Video button** again to resume.



4 Exit

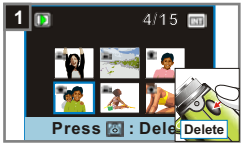
When a recording finishes or stops playing, press the **MENU/OK button** to return to thumbnail view or press the **Record button** to exit.

Once the playback is stopped, you can use the **Up** and **Down buttons** to shift between files.

4 Deleting your files

1 Delete

(Continuing page 15) Once you select the target file, press the **Shutter button** to delete. Then press the **Shutter button** again to confirm the deletion.



2 Exit

Press the **Record button** to exit.

As in the step 1. above, if you do not wish to delete the file, press any button except the **Shutter button** to cancel the deletion.

8. Using the self-timer

The self-timer allows a delay of ten seconds before the shutter fires when taking a self-portrait picture or a movie.

1 **Menu mode**

Press the **MENU/OK button** to enter the ***MENU***.

2 **Set self-timer on**

Use the **Up** or **Down button** to highlight the **Self Timer_** item. Then press the **MENU/OK button** to set self-timer on. You will see a icon at the bottom left section of the LCD display.

3 **Use the self-timer**

When the **Shutter button** is pressed (the **Record button** is functional as well with the self-timer enabled), the camera will have ten seconds delay before taking a picture. After the shutter fires, the self-timer will be automatically disabled.

As in the step 2. above, if you want to cancel the setting of self-timer, you can press the **MENU/OK button** twice to disable.

9. Real-time display on TV

Connect your camera and TV via an AV cable for real-time display. By previewing the camera display on the TV screen, your can share the video clips, still pictures and audio recordings with your family or friends.

1 **Set TV to AV mode**

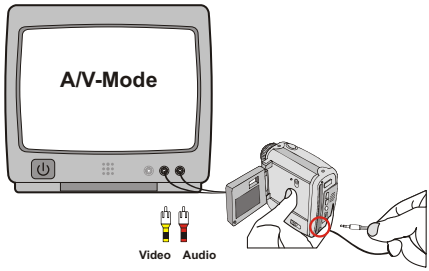
Turn on your TV and switch to the AV mode.

2 **Connect your camera to TV**

Insert the video and audio ends of the AV cable to the AV-in port on your TV.

Insert the other end of the AV cable to the TV-out port on your camera.

3 **Turn on your camera**



If the TV screen displays noises after the camera is connected, check if the TV system (PAL / NTSC) is set appropriate. (Please refer to the "TV system" section on page 23.)

Advanced Settings

1. Settings menu access

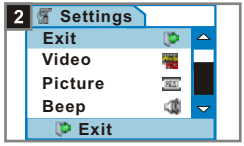
The **Settings** menu provides more advanced features for you to fine-tune the camera. The following describes how to access the **Settings** menu.

1 **Menu mode**

Press the **MENU/OK button** to enter the ***MENU***.

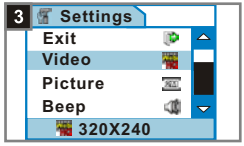
2 **Settings mode**

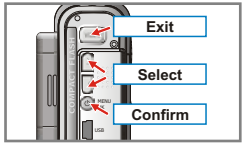
Use the **Up** or **Down button** to highlight the **Settings_** item. Then press the **MENU/OK button** to confirm.



3 **Adjust the settings**

Use the **Up** or **Down button** to highlight the desired item. Then press the **MENU/OK button** to enter the sub-menu.





2. Settings menu events

The **Settings** menu allows you to set some elemental functions of the camera. The following table provides detailed descriptions of the settings items.

Settings	Items		Descriptions
Video		640x480	High quality for viewing on TV.
		352x288	Standard quality and suitable for viewing on TV.
		320x240	High quality for network transmission or email.
		160x128	Standard quality for network transmission or email.
Picture		2560x1920	The most memory-demanding option. Ideal for developing 6x9 or 6x8 photos.
		2304x1728	Suitable for developing 6x8 photos or smaller.
		2048x1536	Suitable for developing 5x7 photos or smaller.
		1600x1200	The default setting. Suitable for developing 4x6 photos or smaller.
		640x480	The most memory-saving option. Suitable for viewing on the computer or email.
Beep		On	This item determines whether the camera speaker beeps when operating the camera.
		Off	
TV system		PAL	This item is related to viewing images on your television. Set the proper TV type to prevent television display problems. The default option depends on your country. PAL is for European countries, China, Hong Kong, etc; NTSC is for America, Japan, Taiwan, Korea, etc.
		NTSC	

Language		This item allows you to set the usage of language on the LCD display. For details on the setting, see page 10.	
Flicker	50	50 Hz	If you travel to another country, the flicker setting may not suit the place you are staying. This item allows you to set the flicker to prevent noises from occurring on your image. The default flicker value depends on your country. For details, please refer to the "More on flicker" section on page 44.
	60	60 Hz	
Display	ON	On	This item determines whether the OSD icons for illustration would appear on the LCD screen.
	OFF	Off	
Default	✔	Yes	This item restores the factory defaults. Note that your current non-default settings will be overridden.
Delete All	✔	Yes	This item allows you to quick-erase all files in the memory card or internal memory.
Format	✔	Yes	This item allows you to format the storage and thus erase all files in the card or internal memory. All files will be gone forever once you execute the format item. *The storage medium icon on the LCD displays as below: Internal memory - CF card - To format the files in the card, please insert the card. To format the files in the internal memory, please remove the card.

Enjoying your Images and Audio Clips on the Computer

1. Installing DV 5100M driver

You need to install **DV 5100M driver** before connecting your camera to the computer to ensure that video clips can be played back on your computer. Please follow the steps to complete the installation.

1 Turn on your computer.

- Do not connect the USB cable to your computer at this stage.
- Turn off other applications running on your computer.

2 Place the supplied CD into the CD-ROM drive.

3 Upon seeing the autorun title screen, move the cursor over the icon (**DV 5100M Driver**) and click it.

If no title appears on the screen, please take the following measures:

1. Double click the "**My computer**" icon.
2. Double-click the CD-ROM drive icon (**DV 5100M driver (E:)***). The name of CD-ROM drive may change depending on your computer settings.
3. Browse to the "**\DV 5100M driver**" folder and start the **Setup.exe** program manually.

4 The "**Install Shield Wizard**" dialogue box appears and the automatic installation takes place. When a window as Fig 1 appears, click "**Next**". Then follow the on-screen instructions to continue.

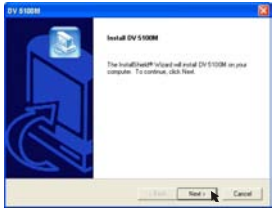

DV 5100M
Install DV 5100M
The InstallShield® Wizard will install DV 5100M on your computer. To continue, click Next.
< Back
Next >
Cancel

Fig 1

Notice for Windows 2000 users

1. The "**Digital Signature Not Found**" dialogue box may appear twice. Please simply click "**Yes**". The camera is fully compatible with Windows 2000.

Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
Unknown software package
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

2. Follow the on-screen instructions and click "**Finish**".

DV 5100M Setup
InstallShield Wizard Complete
Setup has finished installing Video Capture on your computer.
Plug in the camera after you click Finish to complete Setup.
< Back
Finish
Cancel

Do not restart your computer at this stage.

5 After the driver installation is complete, the program will prompt you to install **Windows Media Player Codecs**. If you are not sure whether the codecs have been installed in your computer, please click "**Yes**" and follow the on-screen instructions to complete the installation.

Fig 2

6 After the codec installation is complete, the program will prompt you to install **Direct X 8.0** or above. If you are not sure whether this program has been installed in your computer, please click "**Yes**" to continue.

Fig 3

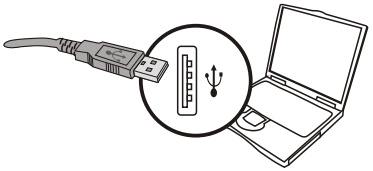
7 After the installation is finished, you may need to restart your computer for the driver to take effect.

Windows Media Player Codecs and **Direct X 8.0** or above are necessary for viewing the video clips recorded by the camera.

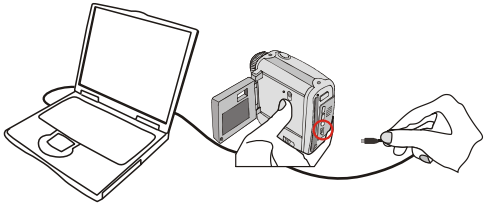
2. Connecting your camera to your computer

1 Turn on your computer.

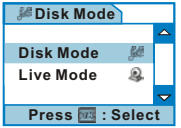
2 Insert the USB cable to the USB port on your computer.



3 Insert the other end of the USB cable to the USB port on your camera.



4 Set your camera to the **Disk Mode_** item. Then press the **MENU/OK button** to confirm.



3. Copying images and audio clips to your computer

1

For Windows XP users

After connecting your camera to the computer, a window will automatically appear (as Fig 4). Select the "**Open folder to view files using Windows Explorer**" item and then click "**OK**".

Fig 4

For Windows 2000/ME/98SE users

Double-click "**My Computer**", and then double-click the new "**Removable Disk**" icon.

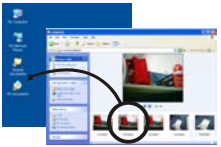
Some users may find two removable disks appear in "**My Computer**". That is because the OS detects two storage media in the camera (the internal memory and the CF card). If you cannot find your files in one of the disks, try to find them in the other disk.

2 Double-click the "**DCIM**" file folder.

3 Double-click the "**100MEDIA**" file folder.

4 Drag the file to "**My Documents**" to copy your image or audio clip to the computer.

For Windows XP users



For Windows 2000/ME/98SE users

The storage position of the files

You can find the files of your pictures, movies and audio clips in the illustrated folder (as Fig 5).

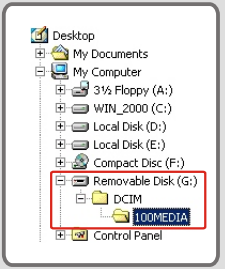


Fig 5

4. Playing on your computer

1 Double-click "**My Documents**".

For Windows XP users

For Windows 2000/ME/98SE users

2 Select the desired file and double-click it to view.

Notice for Windows 2000/ME users on how to disconnect the camera from the computer:

To disconnect your camera from the computer, please follow these steps.

1. Double-click on the task bar.
2. Click (USB Disk), then click "**Stop**".
3. Select the camera (**DV 5100M**) on the confirmation screen and then click "**OK**".
4. Follow the on-screen instructions to safely disconnect the camera from your computer.

Using the PC Camera Function

1. Installing the DV 5100M driver

You need to install the **DV 5100M** driver before using PC Camera or video conferencing function.

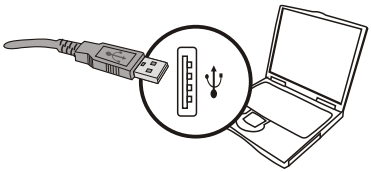
If you never install **DV 5100M** driver, please finish the installation first. For details, please see step 1. "Installing DV 5100M driver" on page 25.

If you have already installed **DV 5100M** driver, please go to step 2. "Connecting your camera to your computer" on the next page.

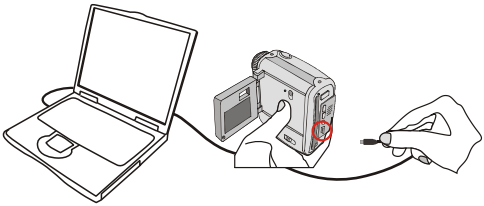
2. Connecting your camera to your computer

1 Turn on your computer.

2 Insert the USB cable to the USB port on your computer.



3 Insert the other end of the USB cable to the USB port on your camera.



4 Set your camera to the **Live Mode_** item. Then press the **MENU/OK button** to confirm.

Notice for Windows 2000/ME/98SE users

During the first-time installation process, please take note of the followings according to your operation system:

For Windows 2000 users

The "**Digital Signature Not Found**" dialogue box may appear twice or more. Please click "**Yes**" to continue. This camera is fully compatible with Windows 2000 system.

For Windows ME users

Please select "**Automatic search for a better driver**" when a window as Fig 6 appears.

For Windows 98SE users

Click "**Next**" when a window as Fig 7 appears.

→ Select "**Search for a best driver for your device**" and click "**Next**" when a window as Fig 8 appears.

→ Select the position where your Windows 98SE CD-ROM drive is. Then follow the on-screen instructions to complete the installation.

Fig 6

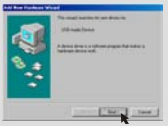


Fig 7

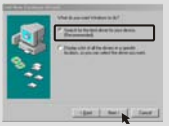


Fig 8

3. Capturing immediate images to your computer

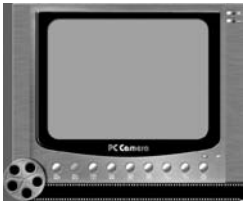
After installing the driver and connecting the camera to your PC, you are now ready to use the PC Camera function or run other video conferencing applications. (This manual provides information related to PC Camera function only.)

1 Launch the software

Double-click the icon on the desktop to execute the program. (If you cannot find the program shortcut on the desktop, please click the "**Start**" menu and go to "**Programs**". Then go to the folder named "**DV 5100M**" and click the program item to launch the software.)

2 PC Camera interface

The windows below is the interface of **DV 5100M**.



3 Capture immediate images

Press the buttons on the PC Camera panel to use the functions.

1. Start recording
2. Stop recording
3. Snapshot
4. Format *
5. Source *
6. Start / Stop preview window
7. Setting *
8. Open album
9. Select video source

* indicates that sub-menu is available.

Viewing your pictures and movies with PC Camera program

Please click the (**Open album**) button on the PC Camera panel, or go to the following path to find the files.

C:\Program Files\DV 5100M\Work Temp

4. Advanced settings

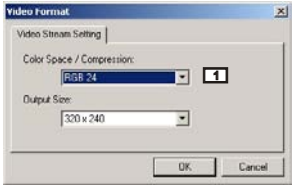
Click the (**Format**), (**Properties**) and (**Setting**) buttons to bring up the advanced settings.

Format settings

1 **Color Space/Compression**

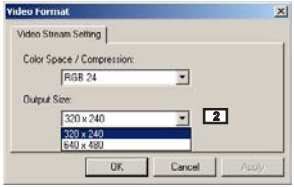
Set one of the following functions according to your needs.

RGB 24: Better image quality.
I420: The file will be compressed to take advantage of faster transmission.



2 **Output Size**

Set output size to change the size of the preview window. The default size is 320x240. Select larger pixels when you need a larger preview window.

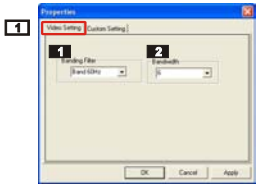


Properties settings

1 Video Setting

1 Banding Filter

If the screen of your computer flickers when using PC Camera function, change the "Banding Filter" item on the "Video Setting" tab to avoid noise. Select "50Hz" or "60Hz" until the screen stops flickering.



2 Bandwidth

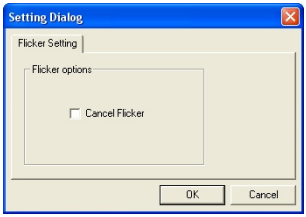
If the controller does not have enough bandwidth available for the camera, set the "Bandwidth" item on the "Video Setting" tab. The smaller the bandwidth value is, the less the bandwidth is occupied, which means more time is required for transmitting images.

2 Custom Setting

You can use the default settings or change the settings of brightness, contrast, saturation, sharpness, and hue on your own.

Flicker setting

If you take your camera abroad, and find the screen of your computer flickers when using PC Camera function, please select the "**Cancel Flicker**" check box to prevent noises from appearing on the screen. Or, you can refer to the **Flicker Settings Table** (p. 44) for proper flicker value that suits the country you are staying.



Troubleshooting

Question	Answer
When using the camera	
The camera has no power.	The batteries may be out of power, please change the batteries.
Cannot power on my camera even though batteries are installed.	❶ Make sure that the batteries are installed correctly. ❷ If the camera is idle for over 3 minutes, it will shut down automatically. Please switch the camera on. (p. 9)
The camera is powered on, but the LCD panel does not display.	❶ Make sure that the **LCD on/off switch** is set to on. ❷ If the camera is idle for over 60 seconds, the LCD display will be turned off. Please press any button to reactivate the display.
Cannot take pictures and movies when pressing the Record / Shutter button.	❶ The storage is full. Please free some space from the CF card or internal memory. ❷ If the "**MEMORY ERROR**" or "**CARD ERROR**" message appears on the LCD, please set the camera to the Settings mode and format the storage medium.
I did not delete the picture and movie, but cannot find the data in the CF card.	Check if your files are stored in the camera's internal memory. If you insert a card, the camera will use the card as the main storage medium and files previously stored in the internal memory will become inaccessible until the card is removed.

The image is too blurred.	❶ Adjust the focus. ❷ Keep the camera steady while pressing the **Shutter button**.
Noise occurs on my camera when viewing the image on the LCD display or on the computer.	Set the filter matching the place you are staying. Please refer to the "More on flicker" section on page 44.
The TV screen does not display after connecting the camera to the TV.	❶ Check if the camera is correctly connected to the TV. ❷ Make sure the TV system is correctly set in the camera settings. Please see page 21 for more details.
☞ When connecting the camera to your computer	
The driver installation failed.	❶ Please remove the driver and other related programs. Follow the installation steps in this manual to reinstall. ❷ Install the driver before inserting the USB cable.
A conflict with other installed camera or capture device.	If you have any other camera or capture device, please disconnect the device and remove its driver from the computer to avoid a driver conflict.
The movie cannot be played on my computer.	Please install **DirectX 8.1** or above and **Windows Media 9.0 Codecs** to solve this problem. (See the "Installing DV 5100M driver" section on page 25 or go to http://microsoft.com to download the required files.)
Noise occurs on my computer when using video conferencing.	Set the filter matching the place you are staying. Please refer to the "Banding Filter" section on page 38.

Other Information

1. Storage capacity

Memory	Still picture (pic.)				
	4M	4M	3M	2M	VGA
Flash memory (13MB)	12	15	18	35	140
CF card (32MB)	30	35	40	80	320
CF card (64MB)	60	70	80	160	640
CF card (128MB)	120	140	160	320	1280
CF card (256MB)	240	280	320	640	2560
CF card (512MB)	480	560	640	1280	5120

Memory	Video clip (min.)				Audio clip
					Maximum
Flash memory (13MB)	1-1.5	2-3	2-3	10-15	18 mins
CF card (32MB)	2-3	4-6	4-6	20-30	40 mins
CF card (64MB)	4-6	8-12	8-12	40-60	80 mins
CF card (128MB)	8-12	16-24	16-24	80-120	160 mins
CF card (256MB)	16-24	32-48	32-48	160-240	320 mins
CF card (512MB)	32-48	64-96	64-96	320-480	640 mins

Notes: 1. Actual value of storage capacity may vary (up to ± 30%) depending on the resolution and color saturation.

2. The table above is for reference only.

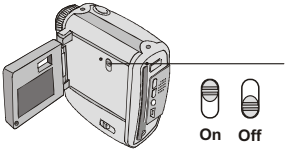
2. Battery indicator

Icons	Meanings
	Full battery life.
	Adequate battery life.
	Low battery life.
	Empty battery life.

*Please replace batteries immediately when the icon indicates that the battery power is depleted.

3. Conserving battery power

If the camera stays idle over 60 seconds, the LCD display will be turned off automatically to conserve power. In addition, you can manually set the **LCD on/off switch** to off to conserve battery power.



4. More on flicker

The default flicker setting of your camera depends on your country. When using the camera abroad, please refer to the table below to match the flicker setting with the place you go.

Country	England	Germany	France	Italy	Spain	Netherlands
Setting	50Hz	50Hz	60Hz	50Hz	50Hz	50Hz
Country	Portugal	America	Taiwan	China	Japan	Korea
Setting	50Hz	60Hz	60Hz	50Hz	50/60Hz	60Hz

5. Specifications

Hardware resolution	2560x1920 (5 Mega pixels)
Sensor effective resolution	2048x1536 (3 Mega pixels)
Internal memory	Built-in 16 MB flash memory (13 MB flash memory for storage)
External memory	Built-in CF slot (maximum: 512 MB)
Digital still camera	JPEG (.JPG) Format. 2560x1920 (5 Mega pixels); 2304x1728 (4 Mega pixels); 2048x1536 (3 Mega pixels); 1600x1200 (2 Mega pixels); 640x480 (VGA)
Digital video camcorder	MPEG4 (.ASF) Format. TV-HQ: VGA (640x480 pixels) / up to 11 fps; TV-S: CIF (352x288 pixels) / up to 30 fps; Web-HQ: QVGA (320x240 pixels) / up to 30 fps; Web-S: 160x128 pixels / up to 30 fps.
Digital voice reocrder	WAVE (.WAV) Format.
Video conferencing	VGA (640x480 pixels) / up to 10 fps QVGA (320x240 pixels) / up to 20 fps
LCD display	1.5" Color TFT LCD
Digital zoom	4x
Exposure	Auto
White balance	Auto
Lens	F=3.0 / 8.7mm
Self Timer	10 seconds
Interface	USB 1.1 (USB 2.0 compatible)
Power saving	Auto power-off if idle for over 3 minutes Auto suspense if idle for over 1 minute
Built-in microphone / speaker	Yes
TV-out	Support NTSC and PAL TV systems
Battery	AAx2 (Alkaline or rechargeable Ni-MH batteries recommended)
Dimension	83x78x41 mm